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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,773	08/21/2003	Hidehiko Kawaguchi	KAMMON 3.0-069 CONT	8770

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EXAMINER
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CARRILLO, BIBI SHARIDAN

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 02/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/645,773	<b>Applicant(s)</b> KAWAGUCHI ET AL.	
	<b>Examiner</b> Sharidan Carrillo	<b>Art Unit</b> 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09531716.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12222003</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 8 are indefinite because it is unclear what is meant by "pure water".

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4, 8-9, and 11 rejected under 35 U.S.C. 102(b) as being anticipated by King (4599116).

King teaches a method of employing an aqueous alkaline cleaner for cleaning of aluminum container surfaces. King teaches that it is desirable to subsequently rinse an alkaline cleaned surface with an aqueous based neutral or acidulated rinse solution at a controlled pH to remove residual cleaning solution there from where after it is subjected to further treatments as may be desired or required. In order to avoid any buildup in alkalinity, it is been found necessary to effect an overflow of the rinse and or a neutralization of alkaline buildup such as by the addition of an acid to maintain the pH of

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the rinse solution at a pH about 7. By maintaining the subsequent water rinse solutions at a neutral or acid pH, the formation of brown stains on the aluminum container bodies is substantially eliminated (col. 7, lines 15-37, col. 12, lines 1-12). Example 4 teaches continuous rinses in a pilot washer. In col. 6, lines 50-51 teaches contacting of the substrate by immersion. The limitations of producing of salt would inherently be met by the teachings of King since King teaches performing the same method steps.

Additionally, it is notoriously well known in the art that salts are produced by acid-base reactions (6759184, 6489353). In reference to claims 2, 4, 9 and 11, refer to col. 7, lines 20-30.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-3, and 7-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Biebl (US2001/0047815).

Biebl et al. teach a method of treating substrates in a container containing a treatment fluid, the method comprising providing a cleaned wafer previously cleaned with DHF, placing the wafer in a container, introducing a rinsing fluid, wherein the rinsing fluid overflows to displace the treatment fluid (col. 2, paragraphs 23-30). The

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rinsing fluid is further displaced by an SCI solution. The limitations of providing a salt would inherently be met by the teachings of Biebl since Biebl teaches performing the same method steps. Additionally, it is notoriously well known in the art that salts are produced by acid-base reactions (6759184, 6489353). In reference to claims 2, 3, and 10, refer to paragraphs 29-30. In reference to claim 7, refer to paragraph 9. In reference to claim 9, refer to paragraph 27.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 5-6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biebl et al. (US2001/0047815) and further in view of Schulz (5853491).

Biebl teaches the neutralizing chemical liquid comprising an aqueous ammonia solution. Biebl et al. fail to teach the limitations of claims 5-6 and 12. Biebl fail to specifically teach cleaning the wafer with an ammonia-hydrogen peroxide or sulfuric acid/hydrogen peroxide solution. Schulz teaches cleaning silicon wafers to remove contaminants. Fig. 1 teaches it is conventional and commonly known in the art to use SC1 and SC2 solutions in the semiconductor manufacturing process. It would have been obvious to a person of ordinary skill in the art to have modified the method of Biebl to include SC1 and SC2 solutions, as taught by Schultz which are conventionally used in the semiconductor manufacturing process.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nagamura et al. teach a method of cleaning a photomask. Olesen et al. and Matthews teach semiconductor cleaning using a single vessel. Kume et al. teach RCA cleaning.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 571-272-1297. The examiner can normally be reached on Monday-Friday, 6:00a.m-2:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sharidan Carrillo  
Primary Examiner  
Art Unit 1746

bsc



SHARIDAN CARRILLO  
PRIMARY EXAMINER